UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/747,537	12/22/2000	Robert A. Migliorini	10212	2084

23455 7590 05/20/2004

EXXONMOBIL CHEMICAL COMPANY
P O BOX 2149
BAYTOWN, TX 77522-2149

EXAMINER	
KRUER, KEVIN R	
ART UNIT	PAPER NUMBER
1773	

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
P.O. BOX 1450
ALEXANDRIA, VA 22313-1450
www.uspto.gov

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 20040513

Application Number: 09/747,537
Filing Date: December 22, 2000
Appellant(s): MIGLIORINI ET AL.

Rick F. James

For Appellants

EXAMINER'S ANSWER

This is in response to the appeal brief filed March 19, 2004.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The Appellants' statement of the issues in the brief is correct.

(7) Grouping of Claims

Appellants' brief includes a statement that claims 1-7, 9, 10, 12-18 and claims 19-30, 33, 35, 37, and 38 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

5,691,043	Keller et al	11/25/1997
5,372,882	Peiffer et al	12/13/1994
5,234,733	Schloegl et al	08/10/1993
5,108,844	Blemberg et al	04/28/1992
4,652,490	Arita et al	05/24/1987

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-7, 9, 10, 13-18, and 30 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Schloegl et al (US 5,234,733) in view of Blemberg et al 5,108,844).

Schloegl teaches a shrink film which is comprised of a plurality of polyolefinic layers. The base layer comprises polypropylene and a hydrogenated hydrocarbon resin admixture, and the top layers on each side of the base layer comprise polyolefinic

sealable raw materials (abstract). Preferably, the base layer comprises 60-95wt% isotactic polypropylene (col 3, line 13) and 5-40wt% hydrocarbon resins (claim1) such as styrene resins, cyclopentadiene resins, toluene, and their hydrogenated derivates (col 3, lines 23+). NOTE: the hydrogenated cyclopentadiene reads on the claimed "saturated alicyclic" of claim 7. The sealable layer comprises a polymer selected from the group consisting of olefinic homopolymers, ethylene-propylene copolymers, ethylene-butylene copolymers, propylene-butylene copolymers, and terpolymers of ethylene, propylene and butylene or another alpha olefin having 5 to 10 carbon atoms (col 3, lines 35+). The sealable layers may further comprise an anti-blocking agent (col 4, lines 8+).

The film possesses a shrinkability of more than 15% in the transverse direction and less than 6% in the longitudinal direction (abstract). The film is stretched more than 7.5 in the traverse direction, preferably 8-11 times (col 5, lines 60+), and less than about 4.5 in the machine direction (col 5, line 52). NOTE: the examiner takes the position that "about 4.5" reads on "about 5." The film has a thickness of 15-50um, preferably 20-45um, wherein the sealable layers each have a thickness of about 0.5-1um (col 4, lines 48+).

Schloegl does not teach that the base layer should comprise a polymeric modifier. However, Blemberg teaches that the layers of a co-extruded multilayer film exhibit improved adhesion to one another when the layers comprise blends wherein the components of the blends have been adjusted (abstract). Specifically, Blemberg teaches that if a first layer comprises film forming polymer or copolymer Y, and a

second film comprises polymer or copolymer X, these layers can have improved adhesion to one another when formed into a multi-layered film if the first layer comprises a percentage of X, and the second layer comprises a percentage of Y (col 2, lines 12+). Thus, it would have been obvious to one of ordinary skill in the art to blend the olefinic polymer comprising the sealable layer of Schloegl into the base layer in amounts sufficient to improve adhesion of the core to the skin layers. The sealable olefinic polymer would read on the claimed "polymeric modifier."

With respect to claim 5, the examiner takes the position that "recycled" limitation is a method limitation. Furthermore, there is no difference between recycled and virgin isotactic polypropylene. Specifically, the recycled and virgin materials are considered to be identical because each material comprises the same monomeric units with the same stereoregularity. The courts have held that a method of making a product does not patentably distinguish said product from a product taught in the prior art unless it can be shown that the method of making the product inherently results in a materially different product. In the current application, no such showing has been made. Thus, the examiner maintains the position that the product taught in Schloegl is identical to the claimed product of claim 5.

With regard to claim 30, the examiner takes the position that multiple layers of the same composition directly adjacent to one another are not patentably distinct from a single layer film of the same composition because the films are identical.

2. Claim 12 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Schloegl et al (US 5,234,733) in view of Blemberg et al 5,108,844), as applied to claims 1-7, 9, 10, 13-18, and 30 above, and further in view of Arita et al (US 4,652,490).

Schloegl in view of Blemberg is relied upon as above. Specifically, Schloegl teaches that the shrinkable olefinic sealable layers may comprise polyethylene homopolymers. However, Schloegl does not teach that the sealable layers may comprise the claimed polyethylene homopolymer. However, Arita teaches a heat shrinkable film comprising an oriented polypropylene core and two outer heat shrinkable sealant layers (abstract). Arita teaches that the sealant layer may comprise LLDPE or LDPE (col 2, lines 53+). Thus, it would have been obvious to one of ordinary skill in the art to utilize LLDPE or LDPE as the polyethylene homopolymer in the seal layer taught in Schloegl because Arita teaches such compositions are useful for sealant layers in heat shrinkable films.

3. Claims 1-7, 9, 10, 13-18, 29, and 30 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Schloegl et al (US 5,234,733) in view of Keller et al (US 5,691,043).

Schloegl teaches a shrink film which is comprised of a plurality of polyolefinic layers. The base layer comprises polypropylene and a hydrogenated hydrocarbon resin admixture, and the top layers on each side of the base layer comprise polyolefinic sealable raw materials (abstract). Preferably, the base layer comprises 60-95wt% isotactic polypropylene (col 3, line 13) and 5-40wt% hydrocarbon resins (claim1) such as styrene resins, cyclopentadiene resins, toluene, and their hydrogenated derivates

(col 3, lines 23+). NOTE: the hydrogenated cyclopentadiene reads on the claimed "saturated alicyclic" of claim 7. The sealable layer comprises a polymer selected from the group consisting of olefinic homopolymers, ethylene-propylene copolymers, ethylene-butylene copolymers, propylene-butylene copolymers, and terpolymers of ethylene, propylene and butylene or another alpha olefin having 5 to 10 carbon atoms (col 3, lines 35+). The sealable layers may further comprise an anti-blocking agent (col 4, lines 8+).

The film possesses a shrinkability of more than 15% in the transverse direction and less than 6% in the longitudinal direction (abstract). The film is stretched more than 7.5 in the traverse direction, preferably 8-11 times (col 5, lines 60+), and less than about 4.5 in the machine direction (col 5, line 52). NOTE: the examiner takes the position that "about 4.5" reads on "about 5." The film has a thickness of 15-50um, preferably 20-45um, wherein the sealable layers each have a thickness of about 0.5-1um (col 4, lines 48+).

Schloegl does not teach that the core may comprise the claimed polymeric modifier. However, Keller teaches a heat-shrinkable, biaxially oriented, multilayer film comprising a core layer and at least one polyolefin containing skin layer adjacent said core layer. The core layer contains isotactic polypropylene and a modifier that reduces the crystallinity of the polypropylene by increasing chain imperfections (abstract). The modifiers are included in amounts of less than 20wt% (see "the core" description of the specification) and can be selected from the group consisting of atactic polypropylene, syndiotactic polypropylene, ethylene-propylene copolymer, propylene-butylene

copolymer, ethylene-propylene-butylene terpolymer and LLDPE (abstract). Thus, it would have been obvious to one of ordinary skill in the art to add a modifier such as atactic polypropylene, syndiotactic polypropylene or the like to the core taught in Schloegl in order to reduce the crystallinity of the core layer.

With respect to claim 5, the examiner takes the position that "recycled" is a method limitation. Furthermore, there is no difference between recycled and virgin isotactic polypropylene. Specifically, the recycled and virgin materials are considered to be identical because each material comprises the same monomeric units with the same stereoregularity. The courts have held that a method of making a product does not patentably distinguish said product from a product taught in the prior art unless it can be shown that the method of making the product inherently results in a materially different product. In the current application, no such showing has been made. Thus, the examiner maintains the position that the product taught in Schloegl is identical to the claimed product of claim 5.

With regard to claim 30, the examiner takes the position that multiple layers of the same composition directly adjacent to one another are not patentably distinct from a single layer film of the same composition because the films are identical.

4. Claim 12 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Schloegl et al (US 5,234,733) in view of Keller et al (US 5,691,043), as applied to claims 1-7, 9, 10, 13-18, 29, and 30 above, and further in view of Arita et al (US 4,652,490).

Schloegl in view of Keller is relied upon as above. Specifically, Schloegl teaches that the shrinkable olefinic sealable layers may comprise polyethylene homopolymers.

However, Schloegl does not teach the claimed polyethylene homopolymer. However, Arita teaches a heat shrinkable film comprising an oriented polypropylene core and two outer heat shrinkable sealant layers (abstract). Arita teaches that the sealant layer may comprise LLDPE or LDPE (col 2, lines 53+). Thus, it would have been obvious to one of ordinary skill in the art to utilize LLDPE or LDPE as the polyethylene homopolymer in the seal layer taught in Schloegl because Arita teaches such compositions are functionally equivalent to the sealant layers taught in Schloegl.

5. Claims 1-7, 9, 10, 13-28, 30, 33, 35, 37, and 38 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Peiffer et al (US 5,372,882) in view of Blemberg et al (US 5,108,844).

Peiffer teaches a multilayer shrink film that can be heat-sealed at low temperatures. The film comprises a base layer and at least one top layer applied on one side. The film has a longitudinal shrinkage of greater than 10% and a transverse shrinkage of greater than 10% at 120C (abstract). The base layer comprises isotactic polypropylene (col 3, lines 14+). Advantageously, the base layer further comprises 1-30wt% of a hydrocarbon resin such as styrene resins, cyclopentadiene resins, terpenes, and their hydrogenated derivatives (col 5, lines 8+). NOTE: the hydrogenated cyclopentadiene reads on the claimed "saturated alicyclic" of claim 7. The top layers comprise any heat sealable alpha olefin polymer such as ethylene-propylene-butylene terpolymers, random ethylene-propylene copolymers, propylene-butylene copolymers, and the like (col 4, lines 13+). The top layers may further include anti-blocking agents (col 6, lines 8+). The top layers of the film may be printed, metallized or laminated (col

8, lines 36+). The film has an overall thickness of 10-40um, with the top layers preferably having a thickness of 0.1-4um each (col 6, lines 1+).

The film can be made by coextruding the three layer film, stretching the film in the machine direction at a temperature of less than about 130C, and then stretching in the transverse direction at a temperature of 130C-155C (col 7, lines 8+). The stretching is preferably performed from about 4-9 in the longitudinal direction and 6-10 in the transverse direction (col 7, lines 37+). The film can then be corona or flame treated on one or both surfaces (col 8, lines 3+). The film is then wound up in a conventional manner using a wind up device (col 7, lines 54+). .

Peiffer does not teach that the core should comprise a polymeric modifier. However, Blemberg teaches that the layers of a co-extruded multilayer film exhibit improved adhesion to one another when the layers comprise blends wherein the components of the blends have been adjusted (abstract). Specifically, Blemberg teaches that if a first layer comprises film forming polymer or copolymer Y, and a second film comprises polymer or copolymer X, these layers can have improved adhesion to one another when formed into a multi-layered film if the first layer comprises a percentage of X, and the second layer comprises a percentage of Y (col 2, lines 12+). Thus, it would have been obvious to one of ordinary skill in the art to blend the olefinic polymer comprising the sealable layer of Peiffer into the core layer in amounts sufficient to improve adhesion of the core to the skin layers.

With respect to claim 5, the examiner takes the position that "recycled" is a method limitation. Furthermore, there is no difference between recycled and virgin

isotactic polypropylene. Specifically, the recycled and virgin materials are considered to be identical because each material comprises the same monomeric units with the same stereoregularity. The courts have held that a method of making a product does not patentably distinguish said product from a product taught in the prior art unless it can be shown that the method of making the product inherently results in a materially different product. In the current application, no such showing has been made. Thus, the examiner maintains the position that the product taught in Peiffer is identical to the claimed product of claim 5.

With respect to the temperature of machine and transverse direction orientation, the examiner takes the position that Peiffer reads on the claimed invention because the range taught in Peiffer encompasses the claimed range. The courts have held that, in the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art," a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed.Cir. 1990).

With regard to claim 30, the examiner takes the position that multiple layers of the same composition directly adjacent to one another are not patentably distinct from a single layer film of the same composition because the films are identical.

6. Claim 12 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Peiffer et al (US 5,372,882) in view of Blemberg et al (US 5,108,844), as applied to claims1-7, 9, 10, 13-28, 30, 33, 35, 37, and 38, and further in view of Arita et al (US 4,652,490).

Peiffer in view of Blemberg is relied upon as above. Specifically, Peiffer teaches that the shrinkable olefinic seal film may comprise polyethylene homopolymers. However, Peiffer does not teach the claimed polyethylene homopolymer. However, Arita teaches a heat shrinkable film comprising an oriented polypropylene core and two outer heat shrinkable sealant layers (abstract). Arita teaches that the sealant layer may comprise LLDPE or LDPE (col 2, lines 53+). Thus, it would have been obvious to one of ordinary skill in the art to utilize LLDPE or LDPE as the polyethylene homopolymer in the seal layer taught in Peiffer because Arita teaches such compositions are useful for sealant layers in heat shrinkable films.

7. Claims 1-7, 9, 10, 13-30, 33, 35, 37, and 38 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Peiffer et al (US 5,372,882) in view of Keller et al (US 5,691,043).

Peiffer teaches a multilayer shrink film that can be heat-sealed at low temperatures. The film comprises a base layer and at least one top layer applied on one side. The film has a longitudinal shrinkage of greater than 10% and a transverse shrinkage of greater than 10% at 120C (abstract). The base layer comprises isotactic polypropylene (col 3, lines 14+). Advantageously, the base layer further comprises 1-30wt% of a hydrocarbon resin such as styrene resins, cyclopentadiene resins, terpenes, and their hydrogenated derivatives (col 5, lines 8+). NOTE: the hydrogenated cyclopentadiene reads on the claimed "saturated alicyclic" of claim 7. The top layers comprise any heat sealable alpha olefin polymer such as ethylene-propylene-butylene terpolymers, random ethylene-propylene copolymers, propylene-butylene copolymers,

and the like (col 4, lines 13+). The top layers may further include antiblocking agents (col 6, lines 8+). The top layers of the film may be printed, metallized or laminated (col 8, lines 36+). The film has an overall thickness of 10-40um, with the top layers preferably having a thickness of 0.1-4um each (col 6, lines 1+).

The film can be made by co-extruding the three layer film, stretching the film in the machine direction at a temperature of less than about 130C, and then stretching in the transverse direction at a temperature of 130C-155C (col 7, lines 8+). The stretching is preferably performed from about 4-9 in the longitudinal direction and 6-10 in the transverse direction (col 7, lines 37+). The film can then be corona or flame treated on one or both surfaces (col 8, lines 3+). The film is then wound up in a conventional manner using a wind up device (col 7, lines 54+). .

Peiffer does not teach that the core should comprise the claimed polymeric modifier. However, Keller teaches a heat-shrinkable, biaxially oriented, multilayer film comprising a core layer and at least one polyolefin containing skin layer adjacent said core layer. The core layer contains isotactic polypropylene and a modifier that reduces the crystallinity of the polypropylene by increasing chain imperfections (abstract). The modifiers are included in amounts of less than 20wt% (see "the core" description of the specification) and can be selected from the group consisting of atactic polypropylene, syndiotactic polypropylene, ethylene-propylene copolymer, propylene-butylene copolymer, ethylene-propylene-butylene terpolymer and LLDPE (abstract). Thus, it would have been obvious to one of ordinary skill in the art to add a modifier such as

atactic polypropylene, syndiotactic polypropylene or the like to the core taught in Peiffer in order to reduce the crystallinity of the core layer.

With respect to claim 5, the examiner takes the position that "recycled" is a method limitation. Furthermore, there is no difference between recycled and virgin isotactic polypropylene. Specifically, the materials are considered to be identical because each material comprises the same monomeric units with the same stereoregularity. The courts have held that a method of making a product does not patentably distinguish said product from a product taught in the prior art unless it can be shown that the method of making the product inherently results in a materially different product. In the current application, no such showing has been made. Thus, the examiner maintains the position that the product taught in Peiffer is identical to the claimed product of claim 5 for the reasons stated above.

With respect to the temperature of machine and transverse direction orientation, the examiner takes the position that Peiffer reads on the claimed invention because the range taught in Peiffer encompasses the claimed range. The courts have held that, in the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art," a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed.Cir. 1990).

With regard to claim 30, the examiner takes the position that multiple layers of the same composition directly adjacent to one another are not patentably distinct from a single layer film of the same composition because the films are identical.

8. Claim 12 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Peiffer et al (US 5,372,882) in view of Keller et al (US 5,691,043), as applied to claims 1-7, 9, 10, 13-30, 33, 35, 37, and 38, and further in view of Arita et al (US 4,652,490).

Peiffer in view of Keller is relied upon as above. Specifically, Peiffer teaches that the shrinkable olefinic seal film may comprise polyethylene homopolymers. However, Peiffer does not teach the claimed polyethylene homopolymer. However, Arita teaches a heat shrinkable film comprising an oriented polypropylene core and two outer heat shrinkable sealant layers (abstract). Arita teaches that the sealant layer may comprise LLDPE or LDPE (col 2, lines 53+). Thus, it would have been obvious to one of ordinary skill in the art to utilize LLDPE or LDPE as the polyethylene homopolymer in the seal layer taught in Peiffer because Arita teaches such compositions are useful for sealant layers in heat shrinkable films.

(11) Response to Argument

Appellants argue that the focus of Blemberg is to improve adhesion between polyolefin layers and layers of other non-polyolefinic materials. Since Schloegl and Peiffer are each drawn to films comprising adjacent polyolefin layer, Appellants argue that the teachings of Blemberg is not applicable to the Schloegl and Peiffer references. The examiner respectfully disagrees with Appellants' characterization of the Blemberg reference. Blemberg teaches that the layers of a co-extruded multilayer film exhibit improved adhesion to one another when the components of one layer are blended into the adjacent layer. Specifically, Blemberg teaches that if a first layer comprises film

forming polymer or copolymer Y, and a second film comprises polymer or copolymer X, these layers can have improved adhesion to one another when formed into a multi-layered film if the first layer comprises a percentage of X, and the second layer comprises a percentage of Y (col 2, lines 12+). Blemberg teaches that layer X and layer Y can be any material suitable for making film layers (col 2, lines 32+). Thus, the examiner maintains the position that the teachings of Blemberg are applicable to the polyolefinic multilayer films taught by Schloegl and Peiffer.

Appellants further argue that Blemberg is not properly combinable with Schloegl or Peiffer because neither primary reference reveals that adhesion between layers is a problem. The examiner notes that the primary reference does not have to provide motivation for the proposed modification. Rather, the prior art as a whole must suggest the proposed modification. In the present application, Blemberg teaches that interlayer adhesion of the multi-layer films taught by Schloegl and Peiffer can be improved by blending the components of the sealable layers into the adjacent base layers.

According to Appellants, one of ordinary skill in the art would not expect interlayer adhesion problems in the films taught by Schloegl and Peiffer because of the adjacent layers are chemically similar. Robert Migliorini offers a similar opinion in the declaration filed January 20, 2004. However, as noted in the advisory action mailed March 9, 2004, the prior art recognizes that oriented isotactic polypropylene films are known to exhibit poor adhesion to heat sealing layers, such as polyethylene compositions, due to their non-polar character and high degree of orientation. Thus, the examiner maintains the position that one of ordinary skill in the art would have been

motivated to improve the interlayer adhesion of the multi-layer films taught by Peiffer and Schloegl.

With regard to the rejections based upon the teachings of Keller, Appellants argue the teachings of Keller are not applicable to the films taught in Schloegl and Peiffer because the films taught in Keller are oriented in a different fashion. Specifically, the films taught in Schloegl and Peiffer are produced by conventional biaxial orientation techniques whereas the films of Keller are biaxially oriented and, thereafter, cooled and then stretched again in the longitudinal direction. Appellants argue that secondary stretching in the longitudinal direction as taught in Keller necessitates that a polymeric modifier be added to the core in order to prevent tearing (col 2, lines 5-7; col 4, lines 42-47). The films are susceptible to tearing because of the additional stress generated by the process taught in Keller. According to Appellants, the polymeric modifier would not be necessary in the films taught by Peiffer and Schloegl because the films are not susceptible to tearing. In support of this position, Appellants have directed the Board's attention to the disclosure of Keller wherein Keller teaches that conventional biaxially oriented films "exhibit desirable strength and tear resistance in both directions of orientation." Therefore, Appellants concludes that one of ordinary skill in the art would not have been motivated to add a polymeric modifier to the conventional biaxially oriented films of Peiffer and Schloegl. The examiner respectfully disagrees with Appellants' conclusion. The examiner has taken the position that any oriented film will undergo strain and is, therefore, susceptible to tearing. Mr. Migliorini's declaration supports the examiner's position. Specifically, Mr. Migliorini admits that any orientation

process increases the strain in a polymeric film. Since strain will increase during any orientation process, the examiner maintains the position that the use of a modifier in order to prevent tearing during orientation as taught in Keller is relevant to any oriented film, regardless of the method by which the film is oriented.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Kevin R. Kruer
May 14, 2004

Paul Thibodeau
Supervisory Patent Examiner
Technology Center 1700

Conferees

Paul Thibodeau, Conferee

Deborah Jones, Conferee

ExxonMobil Chemical Company
Law Technology
P.O. Box 2149
Baytown, TX 77522-2149